

AMENDMENT TO THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (currently amended) Process for the preparation of melamine comprising:
 - (a) providing a first preparing of at least two melamine-containing flow flows in at least two different processes for the preparation of melamine from urea, wherein at least one of the melamine-containing flows contains melamine made from a low-pressure gas-phase process for the preparation of melamine from urea, and at least one other of the
(b) providing a second melamine flow melamine-containing flows contains melamine made from a high-pressure liquid-phase process for the preparation of melamine from urea,
(c) bringing together in a first mixing step the first and second at least two melamine-containing flows to form a mixture thereof, and
(d) cooling the mixture in a cooling step to obtain solid particulate melamine having a particle size D₉₀ of between 10 µm to 1000 µm.
2. (currently amended) Process according to claim 1, wherein the cooling step (d) of cooling the mixture is practiced during or after the first mixing step (c), and wherein the mixture is cooled to a temperature below 250°C.
3. (currently amended) Process according to claim 2, wherein the cooling step (d) comprises bringing the mixture into contact with an aqueous phase coolant.
4. (currently amended) Process according to claim 2, wherein at least one of the first and second melamine-containing flows contains water as a continuous phase, and wherein the cooling step (d) is practiced during the first mixing step (c) by mixing the at least one melamine-containing flow which contains water as the continuous phase with at least one other melamine-containing flow.

5. (currently amended) Process according to claim [[2]] 1, wherein the cooling step (d) is practiced during the first mixing step (c), and wherein the first mixing step (c) comprises bringing the mixture into contact with gaseous and/or liquid ammonia.
6. (cancelled)
7. (currently amended) Process according to claim 1, further comprising a second mixing step (e), during or after the first mixing step (c), wherein the second mixing step (e) which comprises bringing the mixture into contact with an aqueous phase coolant, and wherein the cooling step (d) includes a crystallization step (d1) which comprises cooling the mixture by at least 5⁰C to form the solid particulate melamine, followed by a separation step (d2) comprising isolating the solid melamine from the mixture.
8. (currently amended) Process according to claim 7, further comprising a dissolving step (f), dissolving virtually all the melamine in a dissolving step during or after the second mixing step (e) and prior to the crystallization step (d1), wherein the dissolving step (f) comprises dissolving virtually all the melamine with the aid of heating and/or the addition of an aqueous flow.
9. (currently amended) Process according to claim 1, wherein at least one of the first and second melamine-containing flows contains water as a continuous phase, and wherein the process further comprises, mixture after the first mixing step (c) is subjected to a crystallization step which comprises cooling the mixture by at least 5⁰C to form solid melamine, followed by a separation step which comprises isolating the solid melamine from the mixture.
10. (currently amended) Process according to claim 9, wherein the at least one melamine-containing flow which contains water as the continuous phase is the first contains melamine-containing flow originating from the low-pressure gas-

phase process for the preparation of melamine from urea and is saturated to between 70% and 110% with melamine.

11. (cancelled)
12. (currently amended) Process according to claim 8, further comprising wherein the mixture is subjected to a purification step (g) after the dissolving step (f) and prior to the crystallization step (e1), and wherein the purification step (g) comprises:
 - (g1) [[•]] treating the mixture with NH₃ at a pressure between 1 MPa and 20 MPa and a temperature between 100⁰C and 250⁰C, and
 - (g2) [[•]] optionally conducting an adsorption step and/or a filtration step.
13. (currently amended) Process according to claim 7, comprising cooling the mixture in the crystallization step (d1) to a temperature between 100⁰C and 25⁰C.
14. (new) Process according to claim 1, wherein steps (c) and (d) are practiced together in a quench vessel, and wherein the process further comprises introducing a liquid ammonia flow as a coolant into the quench vessel.
15. (new) Process according to claim 14, further comprising allowing the ammonia to evaporate from the quench vessel.
16. (new) Process for the preparation of melamine comprising:
 - (a) providing a melamine-containing gaseous flow made from a low-pressure gas-phase process for the preparation of melamine from urea;
 - (b) providing a melamine-containing melt flow made from a high-pressure liquid-phase process for the preparation of melamine from urea;
 - (c) spraying the melamine-containing melt flow into contact with the melamine-containing gaseous flow so as to form a mixture thereof; and

- (d) cooling the mixture in a cooling step to obtain solid particulate melamine having a particle size D_{90} of between 10 μm to 1000 μm .
- 17. (new) Process according to claim 16, wherein step (d) comprises spraying liquid ammonia as a coolant into contact with the mixture.
- 18. (new) Process according to claim 17, wherein steps (c) and (d) are practiced simultaneously within a quench vessel.
- 19. (new) Process for the preparation of melamine comprising:
 - (a) providing a first melamine-containing flow made from a low-pressure gas-phase process for the preparation of melamine from urea;
 - (b) providing a second melamine-containing flow made from a high-pressure liquid-phase process for the preparation of melamine from urea; and
 - (c) bringing the first and second melamine-containing melt flows into contact with one another so as to form a mixture thereof; and
 - (d) simultaneously with step (c), cooling the mixture by using one of the first and second melamine-containing flows as a coolant to obtain solid particulate melamine having a particle size D_{90} of between 10 μm to 1000 μm .
- 20. (new) Process according to claim 19, wherein the one of the first and second melamine-containing flows used as a coolant in step (d) contains water as a continuous phase.
- 21. (new) Process according to claim 20, wherein the one of the first and second melamine-containing flows used as a coolant in step (d) which contains water as a continuous phase is the first melamine-containing flow made from a low pressure gas-phase process for the preparation of melamine from urea.